

# International Association of Transportation Regulators (IATR) Conference [2009]

Wednesday, September 16, 2009 9:00 a.m. – 10:45 a.m.  
Session 11 – Taxicab Security Cameras vs. Safety Partitions

## Taxicab Security Cameras and Driver Safety

Craig Leisy<sup>1</sup>

Manager of the Consumer Affairs Unit for the City of Seattle

**SUMMARY.** Taxicab drivers are too often victims of crimes. The risk factors are numerous and well known. Many cities are taking steps to improve taxicab driver personal safety including the installation of equipment to prevent crimes. Initially, safety partitions were the only equipment available. In recent years, security cameras have become a popular alternative. Seattle chose to mandate security cameras in the aftermath of a 2004 taxicab driver homicide. Security cameras are part of a comprehensive taxicab driver safety program that also includes GPS, silent alarms, authority to refuse suspicious trips, improved dispatch procedures, and better driver training. Security cameras have dramatically reduced armed robbery crimes but have not achieved their full potential yet in improving taxicab driver safety.

### TAXICAB DRIVER HOMICIDES

It is taxicab driver homicides that normally prompt city taxicab regulators to propose the adoption of mandatory taxicab driver personal safety equipment such as security cameras or safety partitions but, ironically, this equipment may not reduce homicides. Homicides are a rare event in most cities but homicides with taxicab drivers as victims occur at a greater rate than work place homicides in most other occupations.<sup>2</sup> According to the National Institute of Occupational Safety and Health (NIOSH) report, *Violence in the Workplace* (1996), “[The] Taxicab services [*industry*] had the highest rate of work-related homicide during the 3-year period 1990-92 (41.4/100,000). This rate was nearly 60 times the national average rate of work-related homicides (0.70/100,000).” NIOSH stated that this represented a significant increase

---

<sup>1</sup> Craig Leisy is the Manager of the Consumer Affairs Unit for the City of Seattle. Craig has served in this position since 1996. The Consumer Affairs Unit is responsible for regulating both the taxicab industry and weights and measures in Seattle. The unit licenses approximately more than 950 city and county taxicabs and for-hire vehicles; conducts safety inspections (including security camera system tests) and taximeter tests on these vehicles; and conducts street enforcement activities. Craig has been active in the IATR for a long while and has made numerous presentations at the annual conferences including: *Taximeter Standards and Testing* (2000), *Proof of Taxicab Insurance: Problems and Solutions* (2000), *Taxicab Deregulation and Re-regulation in Seattle: Lessons Learned* (2001), *Taxicab Regulation in Seattle: A New Approach* (2001), *Taxicab Fuel Surcharge* (2003), *Taxicab Insurance Issues* (2003), *Taxicab Equipment Requirements: Considerations for Rulemaking* (2005), *Collection and Use of Information for Effective Regulation of the Taxicab Industry* (2006), *Taxicab Industry Regulation: Vehicle Inspection and Street Enforcement* (2007), *Developing and Sustaining a Professional Driver Workforce* (2008), and *Taxicab Security Cameras and Driver Safety* (2009). Presently, Craig is a IATR board member and he chairs a work group that is tasked with assisting the National Institute of Occupational Safety and Health (NIOSH) with a series of studies on security cameras being performed under a Letter of Agreement.

<sup>2</sup> The remaining text in this section, “Taxicab Driver Homicides”, and the complete text of the sections, “Taxicab Driver Nonfatal Assaults”, “Risk Factors for Violent Crimes Against Taxicab Drivers,” and “Reduction of Violent Crimes Against Taxicab Drivers” are reproduced from a report of the Taxicab Advisory Group (TAG) Committee on Driver Safety to the Director of the Department of Executive Administration (DEA) for the City of Seattle entitled *Taxicab Driver Personal Safety in Seattle and King County: Final Report and Recommendations* (June 18, 2004), pp. 4-7.

---

**DISCLAIMER.** This presentation was written by Craig Leisy, Manager of the Consumer Affairs Unit in Seattle, WA, to promote discussion of this important issue among taxicab regulators at the annual conference of the International Association of Transportation Regulators (IATR) in New York, NY during September 13-16, 2009. He is solely responsible for any errors that it may contain. The presentation does not represent the views of the City of Seattle.

over the homicide rate (26.9/100,000) for the taxicab services industry for the period 1980-89.<sup>3</sup> An analysis of homicide rates by high-risk *occupations* indicates that the rates for the “taxicab driver/chauffeur” occupation were 15.1 per 100,000 during 1983-89 (197 homicides) and 22.7 during 1990-92 (140 homicides).<sup>4</sup> The NIOSH report cites information from the Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI) Program that 73%-82% of the homicides during the period 1992-94 occurred during a robbery or other crime. The NIOSH report cites FBI data that indicated that 76% of the work-related homicides were committed with firearms. Counts by the Bureau of Labor Statistics using CFOI statistics for the period 1992-2006 indicate a maximum of 106 homicides (1993) and a minimum of 37 (2002). The numbers trend down beginning in the second half of the 1990s but have leveled off during the current decade.<sup>5</sup>

## TAXICAB DRIVER NONFATAL ASSAULTS

The OSHA fact sheet, *Risk Factors and Protective Measures for Taxi and Livery Drivers* (2000), cites a U.S. Department of Justice report on workplace violence for the period 1992-1996 and concludes that, “taxi and livery drivers are also among those with the highest rates of nonfatal assault – 183.8 per 1,000 – exceeded only by police (306.0 per 1,000) and private security guards (217.8 per 1,000).”<sup>6</sup> A report by John R. Stone and Daniel C. Stevens, *The Effectiveness of Taxi Partitions: The Baltimore Case* (June 1999), concludes that, “The results of the before/after studies show that shields reduce assaults.”<sup>7</sup> The authors of the report recommend that, “Shields be mandated in cities that have annual assault frequencies, fleet size, and taxi services similar to Baltimore’s,” but they caution that, “for a city with very few violent assaults, the installation of shields may not be justified by the reduction in injury costs if there are no homicides.”<sup>8</sup> Baltimore, with only 1,151 taxicabs, had more than 200 taxicab driver assaults each year during the period 1991-1993. Unaccountably, the number of taxicab driver assaults in Baltimore fell from 224 (1993) to 153 (1994) or 32% when only 7% of taxicabs had partitions installed. Coincidentally, during the reported on period, the authors state that there were significant decreases in factors such as population and unemployment as well as total robberies and drug arrests. As a result, the report warns that, “Additional analysis is necessary to see if there was a significant statistical reduction in driver assaults as a primary result of shields and to determine what other factors may have also contributed to the reduction.”<sup>9</sup>

The number of assaults against taxicab drivers in Baltimore may not be typical. Andrew T. Knestaut, an economist in the Office of Safety, Health and Working Conditions of the Bureau of Labor Statistics, published an article, “Fatalities and Injuries Among Truck and Taxicab Drivers” (1997), which appeared in *Compensation and Working Conditions*, and briefly discussed

---

<sup>3</sup> U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 96-100 *Violence in the Workplace* (1996). See <http://www.cdc.gov/niosh/violcont.html>, Table 8.

<sup>4</sup> Ibid., Table 9. The homicide rate for the “taxicab driver/chauffeur” occupation is lower than the homicide rate for the “taxicab services industry” because the occupation includes chauffeurs who experience few homicides.

<sup>5</sup> U.S. Department of Labor, Bureau of Labor Statistics. *Fatal Occupational Injuries to All Workers by Selected Characteristics 1992-2006* (series). For “Taxicabs” (1992-2002) or “Taxicab drivers and Chauffeurs” Occupation (2003-2006): 1992 (100), 1993 (106), 1994 (102), 1995 (92), 1996 (60), 1997 (93), 1998 (63), 1999 (66), 2000 (61), 2001 (46), 2002 (37), 2003 (64), 2004 (68), 2005 (62), and 2006 (53).

<sup>6</sup> OSHA. *Risk Factors and Protective Measures for Taxi and Livery Drivers* (May 2000).

<sup>7</sup> John R. Stone and Daniel C. Stevens. *The Effectiveness of Taxi Partitions: The Baltimore Case* prepared for the Southeastern Transportation Center at the University of Tennessee-Knoxville (June 1999), p. 37.

<sup>8</sup> Ibid. “Injury costs” refers to a cost effectiveness analysis presented in the report.

<sup>9</sup> Ibid., p. 10.

nonfatal assaults against taxicab drivers using CFOI data for the period 1992-95. He wrote, “Taxicab drivers had relatively few nonfatal injuries – about 1,300 in 1995; only 3 percent were due to nonfatal assaults. These figures suggest that cabdrivers would have relatively safe jobs if deadly violence did not affect their work environments.”<sup>10</sup> Elsewhere, Knestaut elaborates, “...Cabdrivers had few nonfatal injuries, and very few of these were due to assaults. This suggests two situational extremes when cabdrivers were robbed or assaulted: (1) Drivers were not physically harmed, or (2) drivers were fatally injured.”<sup>11</sup>

## **RISK FACTORS FOR VIOLENT CRIMES AGAINST TAXICAB DRIVERS**

Many of the factors that may increase the risk of assault in the workplace are inherent in the taxicab driver occupation. According to the NIOSH report, *Violence in the Workplace* (1996), risk factors for workplaces in general include: contact with the public; exchange of money; delivery of passengers, goods or services; having a mobile workplace such as a taxicab or police cruiser; working with unstable or volatile persons in health care, social service, or criminal justice settings; working alone or in small numbers; working late at night or during early morning hours; working in high-crime areas; guarding valuable property or possessions; and working in community-based settings.<sup>12</sup> Andrew T. Knestaut, an economist in the Office of Safety, Health and Working Conditions of the Bureau of Labor Statistics, published an article, “Fatalities and Injuries Among Truck and Taxicab Drivers” (1997), which appeared in *Compensation and Working Conditions*, that summarized the risk factors for taxicab drivers based on CFOI data for the period 1992-95. He wrote that, “Several factors help to explain why taxicab drivers are frequent victims of [robbery]: They work alone, frequently at night, and handle cash. In addition, taxicab drivers tend to work in areas, such as inner cities, with higher crime rates.”<sup>13</sup> According to statistics that Knestaut cites in the article, only about 26% of taxicab driver homicides occur between 8:00 a.m. and 8:00 p.m. and 70% of homicides are committed by shootings. Normally, strategies that are recommended to reduce violent crimes against taxicab drivers focus on elimination or mitigation of these risk factors.

## **REDUCTION OF VIOLENT CRIMES AGAINST TAXICAB DRIVERS**

There is no consensus among taxicab regulators and police departments in the major U.S. cities on the most effective safety strategies to reduce crimes against taxicab drivers that result in homicides and nonfatal assaults. NIOSH did not complete an occupational violence research project, *Evaluation of Prevention Strategies to Reduce Crime Against Taxi Cab Operators*, to study the effectiveness of safety partitions in Baltimore and video surveillance camera systems in Houston.<sup>14</sup> NIOSH had expected to conclude the project in 2005 and issue a report.

A study by Dana Loomis et al., *Effectiveness of Safety Measures Recommended for Prevention of Workplace Homicide* (2002), which was published in the *Journal of the American Medical Association*, examined workplaces in high risk industries (including taxicabs but predominately convenience stores) in North Carolina during 1994-98 to investigate the effectiveness of

---

<sup>10</sup> Andrew T. Knestaut. “Fatalities and Injuries Among Truck and Taxicab Drivers” *Compensation and Working Conditions* (Fall 1997), p. 55.

<sup>11</sup> Ibid.

<sup>12</sup> U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 96-100 *Violence in the Workplace* (1996)

<sup>13</sup> Andrew T. Knestaut. “Fatalities and Injuries Among Truck and Taxicab Drivers” *Compensation and Working Conditions* (Fall 1997), p. 55.

<sup>14</sup> See: [http://www.cdc.gov/niosh/injury/traumaviol\\_taxi.html](http://www.cdc.gov/niosh/injury/traumaviol_taxi.html). [no longer an active link]

administrative and environmental interventions for preventing homicides in the workplace. The study found that elimination of working alone at night and the use of bright exterior lighting reduced the risk of homicides but other interventions were not effective. For example, “...(O)ther recommended or legally required interventions, including improved visibility of the work area from outside, video surveillance cameras, observation mirrors, posted notices of limited cash on hand, and training to prepare workers for robberies, did not appear to be effective in preventing robbery-related homicides...”<sup>15</sup>

The effectiveness of steps to reduce crimes against drivers, other than the installation of security camera systems and safety partitions, is illustrated by the remarks of John R. Stone, author of the Baltimore partitions study, a few years earlier at a Taxi Driver Security Conference in Montreal. Stone observed that, after a taxicab driver murder in 1990, the Taxi Bureau organized a roundtable including the taxicab industry, police, and other agencies and implemented safety programs including: flashing rear emergency lights and priority for 911 taxi calls, media coverage and rewards for taxicab driver assailants, police spot inspections of taxicabs and passengers, and a training video for drivers on taxicab driver safety. He stated, “Between 1990 and 1995, as a result of Round Table efforts, the number of [Montreal] taxi robberies fell dramatically by 60% from 187 annual armed robberies to 76. Furthermore, relations between taxi drivers, the police, and the community improved.”<sup>16</sup>

NIOSH discusses prevention strategies in three categories: environmental designs, administrative controls, and behavioral strategies. **Environmental designs** include cash-handling practices, physical separation between workers and the public, improved visibility and lighting, cameras, and alarms. The NIOSH report, *Violence in the Workplace* comments specifically on environmental design and taxicabs – “It may also be useful to explore the feasibility of cashless transactions in taxicabs and retail settings through the use of machines that accommodate automatic teller account cards or debit cards.”<sup>17</sup> John R. Stone and Daniel C. Stevens, in *The Effectiveness of Taxi Partitions: The Baltimore Case*, agree but caution that these steps won’t prevent assaults against taxicab drivers – “Methods such as the use of credit cards for fares, automatic vehicle location (AVL), in-vehicle cameras and silent alarms are solutions that have the potential to protect drivers. Yet none separate the driver from physical threat.”<sup>18</sup> Ironically, the Baltimore study illustrates that even bullet-resistant safety partitions don’t always protect drivers from physical threats. In 1997, the second year after 100% of the taxicabs had installed safety partitions, there were two taxicab driver homicides in Baltimore – the first homicides in four years.<sup>19</sup> **Administrative controls** refers to work practices. In the taxicab industry, administrative controls might include dispatch and emergency procedures. Finally, **behavioral strategies** include training in conflict resolution, training to raise awareness of risks of workplace violence, and training in the use of protective equipment. Some prevention strategies help deter crimes against taxicab drivers, others help protect drivers from injury, and still others help the police find the assailants. OSHA neatly summarizes this situation as follows: “There is

---

<sup>15</sup> Dana Loomis, Stephen W. Marshall, Susanne H. Wolf, Carol W. Runyan, and John D. Butts. “Effectiveness of Safety Measures Recommended for Prevention of Workplace Homicide” *The Journal of the American Medical Association* Vol. 287, No. 8 February 27, 2002. See: <http://jama.ama-assn.org>.

<sup>16</sup> John R. Stone. “Taxi Driver Security” Remarks prepared for the Taxi Driver Security Conference sponsored by the Security Committee of the Montreal Urban Community Taxi Bureau (December 6, 1996).

<sup>17</sup> U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. DHHS (NIOSH) Publication No. 96-100 *Violence in the Workplace* (1996), “Risk Factors and Prevention Strategies”.

<sup>18</sup> John R. Stone and Daniel C. Stevens. *The Effectiveness of Taxi Partitions: The Baltimore Case* prepared for the Southeastern Transportation Center at the University of Tennessee-Knoxville (June 1999), p. 38.

<sup>19</sup> *Ibid.*, p. 10. Table 2.3 “Taxi Shield and Baltimore Crime Data” The homicides during the period of the study were: 1991 (2), 1992 (1), 1993 (1), 1994 (0), 1995 (0), 1996 (0), 1997 (2).

no ‘one-size-fits-all’ solution. A number of measures may help reduce the risks encountered by taxi and livery drivers. Improving safety for drivers will require the efforts and commitments of vehicle owners, drivers, service providers, law enforcement agencies, regulatory officials, and local government regulators. A number of strategies are being tried, but the deterrent effect of many of these is unknown. Some may not prevent injury but may speed response time when an incident occurs.’<sup>20</sup>

## THE SAFETY STRATEGY IN SEATTLE

The suspects in the January 31, 2004 killing of Yellow Cab driver Hassan Farah on Beacon Hill near Boeing Field were arrested by the Seattle Police Department (SPD). Hassan Farah had picked up a passenger at a McDonald’s restaurant on MLK Jr. Way just minutes before the crime. Until the Farah robbery homicide, no taxicab driver had been killed in Seattle for more than seven years. On December 17, 1996, Farwest Taxi driver Kashmir Singh had been murdered in West Seattle after picking up passengers at a Safeway supermarket. Both drivers had been dispatched on the trips when they were killed. The Farwest taxicab driven by Kashmir Singh in 1996 had a bullet-resistant safety shield installed.

In 1996, the City of Seattle finished a complete rewrite of the Taxi Code<sup>21</sup> in an effort to improve taxicab service. Several new provisions in the new Taxi Code addressed driver personal safety because there had been several recent violent crimes against drivers.<sup>22</sup> Some of these provisions included: (1) a requirement that each taxicab have two-way communication<sup>23</sup>; (2) a requirement that the driver training course and written test address driver personal safety; and (3) the new authority for taxicab drivers to refuse service if they believe that there is a threat to their personal safety.<sup>24</sup>

Shortly after the 1996 driver killing, Farwest Taxi, Yellow Cab, Graytop Cab [now part of Yellow Cab], and Orange Cab installed computer dispatch systems with GPS in each affiliated taxicab. GPS informs dispatchers of the precise “real time” location of each taxicab allowing the dispatchers to direct police to taxicabs reporting emergencies. Approximately 98% of all Seattle taxicabs have computer dispatch with GPS and the remainder have radio dispatch with GPS. During the six years before GPS was installed (1991-1996), there were six drivers killed but, in the six years after GPS (1997-2004), there was one driver killed - an 83% reduction. In 2003, the Consumer Affairs Unit, which regulates the taxicab industry in Seattle, modified the quarterly Service Information Report submitted by taxicab associations to collect information on serious crimes against drivers [e.g., assaults, robberies].

---

<sup>20</sup> OSHA. *Risk Factors and Protective Measures for Taxi and Livery Drivers* (May 2000).

<sup>21</sup> Seattle Municipal Code, Chapter 6.310 [new]

<sup>22</sup> Michael Barhe (Orange) shot and stabbed but not fatal on 10/16/96, Harvinder Kahlon (Farwest) fatally shot on 12/15/95 in Renton, Ike Slodov (Yellow) fatally shot on 8/16/94, Shola Awotundun (Broadway) fatally shot on 3/21/94, Fred Rivas (Yellow) stabbed but not fatal on 1/29/94, Jeffrey Sowers (Farwest) shot but not fatal on 10/21/91, Donald Kelley (Yellow) beaten to death on 7/1/91, and James Francis Lee (Yellow) fatally shot on 3/13/91.

<sup>23</sup> A revision effective on April 15, 2000 [Ordinance No. 119872] required that the two-way communication be a radio, instead of a cell phone, and that each taxicab association be staffed whenever an affiliated taxicab was operating [SMC 6.310.320N and SMC 6.310.230A1f].

<sup>24</sup> SMC 6.310.465K states, “K. A for-hire driver shall not refuse to transport any person except when: ...2. The passenger is acting in a disorderly or threatening manner, or otherwise causes the for-hire driver to reasonably believe that the for-hire driver’s health or safety, or that of others, may be endangered.”

It was generally believed that the steps taken by the City of Seattle and the taxicab industry were adequate to address driver personal safety concerns. The long period without a driver homicide appeared to confirm this. However, the Farah shooting in 2004 caused the City of Seattle to re-examine driver personal safety to determine what additional steps could be taken to make further improvements in taxicab driver personal safety. The Taxicab Advisory Group (TAG) Committee on Driver Safety was established to study the driver safety issues and to evaluate the effectiveness of safety strategies adopted in other large cities. The Committee held a series of meetings and submitted a comprehensive report with a list of specific recommendations to the Director of the Department of Executive Administration (DEA). The members of the TAG Committee on Driver Safety included:

NAME	ORGANIZATION
Det. Robert Adams	Seattle Police Department
Michael Civitelli	Port of Seattle [Sea-Tac Airport]
Frank Dowgwilla	Puget Sound Dispatch
Debbie Duggan <sup>25</sup>	Cab Drivers' Alliance of King County [taxicab lease driver]
Tsegaye Desta	Yellow Cab [taxicab owner/driver]
Frank Finneran	Renaissance Seattle Hotel
Janis Webb	Hopelink
Rick Nelson Jr.	Redtop Taxi
Craig Leisy	City of Seattle [Consumer Affairs Unit] - Facilitator
Diana Toledo	King County [King County Licensing] - Observer

The TAG Committee on Driver Safety had several goals including:

- (1) A report on the trends of violent crimes against drivers in Seattle during the past 10 years;
- (2) A comparison of statistics on violent crimes against taxicab drivers before and after installation of GPS, safety shields, or security cameras based on a survey of selected cities;
- (3) A comparison of the effectiveness of GPS, safety shields, and security cameras based on the trends in statistics on violent crimes against drivers in the survey of other cities;
- (4) A comparison of the advantages and disadvantages of the use of GPS, safety shields and security cameras for driver personal safety;
- (5) A comparison of the typical costs for GPS, safety shields and security cameras based on a survey of suppliers;
- (6) A review of provisions in the Taxi Code [SMC 6.310] that address driver personal safety – e.g., new driver training, two-way communication, refusal of service based on threats; and
- (7) A review of driver personal safety procedures and training at the licensed taxicab associations.

During 2004, the Consumer Affairs Unit mailed a survey to approximately all active Seattle and King County taxicab drivers to collect information on crimes against taxicab drivers that may not have been reported to the police.

---

<sup>25</sup> Fasika Moges and Terry Davis served as alternates.

## **SEATTLE TAXICAB DRIVER SAFETY SURVEY RESULTS**

**SURVEY OF CRIMES AGAINST TAXICAB DRIVERS.** The survey questionnaire was mailed to approximately 2,500 active Seattle and King County taxicab drivers during March-April 2004. The return rate for survey questionnaires was about 10% (typical).

**NUMBER OF CRIMES.** Approximately 12% of taxicab drivers completing the survey questionnaires reported that they had been the victims of robberies sometime while operating a taxicab and 9% indicated that they had been the victims of assaults.

**TIME OF CRIMES.** Nearly 96% of robberies and 83% of assaults occurred during the evening or early morning hours (6:00 p.m.-6:00 a.m.).

**LOCATION OF CRIMES.** Approximately 67% of robberies and 89% of the assaults occurred in Seattle city limits as opposed to the greater metro area.

**TRIP TYPE.** Almost 63% of taxicab robberies were stand/hail trips even though these trips generally account for just 30% of all trips. For assaults, stand/hail crimes are proportional to stand/hail trips.

**INJURIES.** Injury data is not reliable because the survey questionnaire did not ask the type of injury, whether the injury required medical treatment, or if there was lost work due to the injury. However, of all drivers who reported that they were victims of taxicab crimes, almost 41% of drivers also reported being injured during a robbery and 74% during an assault.

**WEAPON.** Slightly more than 70% of robberies involved a gun or knife but only 15% of assaults.

**DRIVER TYPE.** Lease drivers comprised nearly 89% of drivers who were robbed and 79% of drivers who were assaulted. Lease drivers comprise about 75% of all drivers. Owner who drive often take the day shift since that shift normally earns more revenue.

**DRIVER EXPERIENCE.** Of all drivers who were victims of taxicab crimes, nearly 37% of the drivers were victims of robberies or assaults during their first year driving taxicabs and more than 68% of the drivers were victims during the first 3 years.

**DRIVER TRAINING.** Approximately 75% of drivers reported receiving driver personal safety training in both the 1-week taxicab association training program and the 2-day city/county Professional Driver Course. Roughly half of the drivers recommend more training and about one-third think that the Seattle Police Department should help develop/deliver this training.

**SUSPECTS.** There was only 1 suspect in 52% of the robberies and 67% of the assaults.

**REPORTING CRIMES TO POLICE.** Drivers reported nearly 78% of robberies to the police and 58% of assaults. This seems to contradict a general opinion among drivers that just a small fraction of all taxicab crimes are reported to the police.

## TAXICAB CRIME REPORTING AND STATISTICS IN SEATTLE

The Seattle Police Department (SPD) historical taxicab crime statistics for the period 2000-2004 and the King County Sheriff's Office (KCSO) historical statistics for the period 1999-2004 were provided to the TAG Committee on Driver Safety. The Port Police at Sea-Tac Airport reported that they have no record of robberies or assaults against taxicab drivers during the previous 6-7 years. The completeness and accuracy of the police statistics on crimes against taxicab drivers was questionable for several reasons: (1) taxicab drivers often don't report crimes to the police<sup>26</sup>; (2) taxicab drivers often don't report crimes to their taxicab associations; (3) police officers may not identify a victim as a taxicab (i.e., optional field, data not entered consistently) so crimes against taxicab drivers cannot be reported from police databases; (4) police records may double count one crime as both a robbery and an assault; and (5) all crimes involving taxicabs are combined (e.g. "run outs", crimes by drivers on other drivers or passengers, driver domestic violence cases) in police databases. Despite this, crime statistics were helpful in defining the nature and approximate scope of the driver safety problem in Seattle and King County.

The SPD Crimes Analysis Unit published a memorandum, "Taxi Cab Related Offenses", dated April 20, 2004 with charts and maps showing the location of crimes committed during the period 2000-2003 that involved taxicab drivers as either victims or suspects in homicides, armed robbery, strong arm robbery (no weapon), simple assault, and aggravated assault (with weapon).

<u>YEAR</u>	<u>TOTAL CRIMES 1/</u>	<u>CLEARANCE RATE 2/</u>
2000	61	15/61 (25%)
2001	75	29/75 (38%)
2002	61	16/61 (26%)
2003	65	16/65 (25%)

Notes: 1/ Total crimes includes taxicab drivers as either victims or suspects: 2000 – 50 victims/11 suspects, 2001 – 57/18, 2002 – 43/18, 2003 – 56/9. 2/ Clearance rate is the percent of crimes where an arrest is made (does not refer to convictions).

The SPD charts break down information about these crimes for the 13 1/2-month period, January 1, 2003 – February 15, 2004 3/:

<u>Crimes by Type</u>	<u>Crimes</u>	<u>Crimes by Sector</u>	<u>Most Crimes</u>
Homicide:	1 (1%)	Homicide:	Robert (1)
Armed Robbery 4/:	13 (19%)	Robbery:	George (6), Robert (3)
Strong Arm Robbery:	3 (4%)	Assaults:	King (7), Mary (7)
Aggravated Assault:	14 (21%)		
Simple Assault:	37 (54%)	<u>Day of Week</u>	<u>Most Crimes</u>
Total	68	Robbery:	Fri (4.4)
		Assault:	Wed (11)

Note: 3/ Information taken from charts and maps provided by SPD. 4/ Robbery statistics don't include "run outs", or passengers who fail to pay fares, which are considered by SPD to be crimes of theft.

The majority of taxicab robberies occurred in the Central Area and the majority of assaults against taxicab drivers occurred downtown. The location of the assaults is probably related to the presence of clubs and bars downtown. The clearance (arrest) rate for taxicab robberies and

<sup>26</sup> The results of a survey of crimes against taxicab drivers conducted during March-May 2004 indicated that 78% of robberies and 55% of assaults are reported by the taxicab driver to the police.

assaults in Seattle was approximately the same as the clearance rate for all robberies and assaults – in the range of 25-40%. Most crimes against taxicab drivers in Seattle occurred during hours of darkness.

<u>YEAR</u>	<u>6PM-6AM</u>	<u>ASSAULTS</u>	<u>ROBBERIES</u>
2000	82%	34	15
2001	71%	37	17
2002	77%	36	11
2003	75%	33	14

A review of King County taxicab crimes indicated that three-quarters occurred during evening or early morning hours (6P-6A); robberies (8) were most common followed by carjackings (6), threats (5), assaults (3) and road rage (1). If a weapon was used it was a gun and just one crime resulted in injuries to the driver.

### **CRIME RISK FACTORS FOR SEATTLE TAXICABS**

There are several reasons for reviewing taxicab crime statistics: (1) to determine the nature and scope of the threat to driver personal safety; (2) to compare trends in crime rates before and after safety strategies are implemented in order to assess their effectiveness; and (3) to identify risk factors so that effective safety strategies can be developed.

The general risk factors applicable to the taxicab industry were discussed previously. In Seattle, the TAG Committee on Driver Safety found the same risk factors and identified others such as driver experience. For example, nearly all robberies and assaults occurred in the evening or early morning hours during the second shift. Many drivers working the second shift are new, inexperienced drivers - most of the taxicab drivers who were crime victims had only 1-3 years of driving experience.<sup>27</sup> Also, the SPD statistics indicated that the majority of crimes were committed in two geographical areas – downtown and the Central Area (just east of downtown).

The fact that nearly all taxicab crimes occurred during the second shift could be attributed to numerous factors including: (1) new drivers usually start on the less desirable (fewer trips) night shift; (2) lease drivers drive night shift more than owner-drivers; (3) night shift drivers may be fatigued and could have impaired judgment about whether a trip is suspicious; (4) there are fewer fares at night and drivers may take trips that they otherwise might not because they need the money; (5) the bar/club crowd is taking taxicabs and drugs or alcohol is likely a factor (esp. regarding assault); and (6) in the early morning the shifts are ending and drivers will have the most cash. It was not possible to give appropriate weight to these factors individually.

Other trip characteristics that didn't appear to be risk factors because they were proportionately represented in crime statistics include: taxicab association affiliation; dispatch vs. stand/hail trips; computer v. radio dispatch trips; dispatch v. no dispatch trips (e.g. Seattle-Tacoma International Taxi Association); number of passengers per trip; and the city where the crime occurred.

SPD crime statistics and safety statistics published by federal agencies are normally presented in terms of crimes or injuries per 100,000 population. If the risk of taxicab driver homicides in

---

<sup>27</sup> The results of a survey of crimes against taxicab drivers conducted during March-May 2004 indicate that 68% of drivers who reported being victims of robberies and assaults had 0-3 years experience operating a taxicab.

Seattle was calculated in this manner it would be very small since approximately 5,000,000 trips are provided by taxicabs annually and there was 7 years between the last two homicides. Even the risk of robbery or assault would appear to be very small:  $5,000,000 \text{ paid trips} \div 80 \text{ crimes} = 1 \text{ crime} : 62,500 \text{ trips}$ .<sup>28</sup> However, if the risk was calculated as a percentage of active taxicab drivers that would be victims/suspects in a given year it would appear to be much more significant:  $80 \text{ crimes} \div 1,400 \text{ active Seattle drivers} \times 100 = 6\%$ . Further, the risk to second shift drivers would be higher still because only about one-half as many taxicabs operate then but 75% of the crimes occur during that shift. SPD counts robberies and assaults that occur during the same incident as two crimes and that could result in some double counting of crimes. By contrast, the FBI uses a hierarchy of offenses to count an incident with both a robbery and assault as just a robbery.

What was uncertain, was whether there was a clear link between robberies and driver injuries. The question asked in the driver survey was poorly worded and, as a result, the survey results are ambiguous on the subject of driver injuries. The results of the driver survey indicate that a driver was nearly twice as likely to be injured during an assault than during a robbery.<sup>29</sup> This means that safety strategies designed to reduce robberies may not be very effective in reducing injuries.

There is considerable anecdotal evidence that taxicab assaults are probably underreported because drivers cannot make a living if they spend hours at the police precinct doing paperwork. Crime statistics may also be underreported because some drivers quit after they are victims of crimes.

## **RECOMMENDATIONS TO IMPROVE DRIVER SAFETY IN SEATTLE**

The TAG Committee on Driver Safety generally reached agreement<sup>30</sup> on 14 recommendations in the areas of crime reporting, dispatch and emergency procedures, taxicab driver personal safety training, and taxicab safety equipment. It was believed that these changes to the existing safety strategy would improve taxicab driver personal safety by helping to deter crimes, protect drivers, and assist SPD in arresting suspects.

### **CRIME REPORTING**

- (1) SPD should consider changing crime reporting procedures to make it easier to find records of crimes against taxicab drivers in the SPD database, e.g., make “occupation of victim” (“taxicab driver”) a required field rather than an optional field so that records of all taxicab crimes can be identified in the database. Also, consider adding a data field that would indicate the taxicab name and number (e.g., “Yellow 123”) to aid comparisons with taxicab industry and taxicab regulatory program records.
- (2) SPD should be asked to publish summary statistics on taxicab crimes each year showing the number of homicides, armed robberies, strong arm robberies, aggravated assaults, and simple assaults. The report should also include information on crime locations,

---

<sup>28</sup> Assumes 60 crimes reported annually + 20 not reported to SPD – a conservative estimate.

<sup>29</sup> The results of a survey of crimes against taxicab drivers conducted during March-May 2004 indicate that 41% of drivers report that they were injured during a robbery while 70% of drivers report that they were injured during an assault. The survey question should have asked the driver to indicate the nature of the injuries and whether the driver required medical treatment, required hospitalization, missed work, etc.

<sup>30</sup> The subject of driver personal safety is very contentious. The eight members of the Committee were purposely drawn from diverse backgrounds and it was therefore always unlikely that they would unanimously agree on the recommendations. The contents of these recommendations reflect the majority opinion as expressed during the meeting discussions. Members were also polled on the final draft set of recommendations. There were individual differences but no significant minority opinions to report.

crime time of day, taxicab driver injuries, and suspect arrests (closure rate). This information should be provided to new drivers in the driver personal safety training portion of the Professional Driver Course. In addition, crime trends should be monitored by the Consumer Affairs Unit to assess the effectiveness of changes in taxicab dispatch and emergency procedures, driver personal safety training, and taxicab safety equipment in order to improve driver safety. The Consumer Affairs Unit should be required to report to the Director of the Department of Executive Administration on the effectiveness of the new safety strategy periodically.

- (3) The Department of Executive Administration should require that all taxicab associations report all crimes against taxicab drivers on the quarterly service information report so that the Consumer Affairs Unit can consult with SPD to evaluate the effectiveness of the safety strategy and compile lessons learned for use by instructors of the Professional Driver Course.
- (4) The Department of Executive Administration should educate all taxicab drivers about the need to promptly report crimes to SPD so that they can be properly investigated and pattern crimes can be prevented. Taxicab association dispatchers shall be required to ask affiliated drivers who have been the victim of a crime whether they have reported the crime to 911. If not, the taxicab association should be required to call 911 and report the crime.

#### DISPATCH AND EMERGENCY PROCEDURES

- (5) The Department of Executive Administration should require that taxicab associations to attempt to obtain a name, call back telephone number, and address for each service request prior to dispatching a taxicab. Taxicab associations should refrain from dispatching taxicabs to street corners or other suspicious locations.
- (6) The Department of Executive Administration should encourage taxicab drivers to ask passengers for destinations when they enter the taxicab and before starting trips. Drivers should be authorized to refuse to transport passengers who will not provide destinations or who state destinations that are vague.
- (7) The Department of Executive Administration should authorize taxicab drivers to use their professional judgment, based on experience and training and the specific circumstances of each situation, and refuse service to passengers behaving in a suspicious manner [the current taxicab ordinance already authorized drivers to refuse service whenever passengers are behaving in a threatening manner<sup>31</sup>].

#### TAXICAB DRIVER PERSONAL SAFETY TRAINING

- (8) The Department of Executive Administration should require that taxicab associations include one (1) hour of training during the 1-week taxicab association training program addressing emergency procedures and safety equipment.
- (9) The Department of Executive Administration should require that all new drivers attend a Part II of the Professional Driver Course, within 3 months of being issued an initial for-hire driver license, that consists of 4 hours of taxicab driver personal safety training.
- (10) The Department of Executive Administration should develop a separate 8-hour taxicab driver personal safety refresher training course and make it required training for for-hire driver license renewal every three years (at the same time as physical exam). The refresher training should be comprised of 4 hours devoted to driver personal safety

---

<sup>31</sup> See SMC 6.310.465K.2:

L. A for-hire driver shall not refuse to transport any person except when:

2. The passenger is acting in a disorderly or threatening manner, or otherwise causes the for-hire driver to reasonably believe that the for-hire driver's health or safety, or that of others, may be endangered;

including refusal of service, habits of safe drivers, emergency procedures, safety equipment, crime reporting as well as a 4 hour defensive driving course including “road rage” training.

## **TAXICAB SAFETY EQUIPMENT**

- (11)The Department of Executive Administration should require that all taxicab owners install an approved digital security camera system in their taxicabs. This requirement should be phased in over a 6 or 12-month period. The City of Seattle should adopt Rules specifying technical standards for digital security camera systems that are approved for installation in taxicabs. Taxicab owners should be permitted to purchase and install any security camera system that is approved. The Rules should require that only SPD has possession of the viewing software for digital security camera systems and that images are only used in the investigation of serious crimes so that the privacy of passengers is protected.
- (12)The Department of Executive Administration should require that taxicab drivers inspect the safety equipment to make certain that it is in good operating condition as part of the safety checklist that must be filled out at the start of each shift.
- (13)The Department of Executive Administration should consider requiring all taxicab owners to install a “silent alarm” out of sight of the passengers for notifying dispatch about an emergency situation.
- (14)The Department of Executive Administration should encourage every taxicab owner to install a GPS tracking system so that the taxicab association can report the taxicab position and direction of travel to the police during an emergency.  
[NOTE: Automatic vehicle location (AVL) systems which provide GPS tracking are widely available. One basic system costs approximately \$400 per vehicle for a GPS receiver and radio modem and \$10 per month per vehicle for airtime costs.]

## **NEW SEATTLE TAXICAB ORDINANCE**

Ordinance 121738 was introduced to the Seattle City Council and, on February 22, 2005, was passed by a vote of 7-0. The Mayor signed the ordinance on March 2, 2005. The ordinance amended the Taxicab Code (Seattle Municipal Code, Chapter 6.310) and included virtually all of the recommendations concerning dispatch and emergency procedures, taxicab driver personal safety training, and taxicab safety equipment. The preamble included the following:

*WHEREAS, driving a taxicab is identified as a high risk occupation by the National Institute of Occupation Safety and Health, and a recent safety study recommended that additional safety equipment be provided and additional safety procedures and training be established;*

The TAG Committee on Driver Safety had recommended that security cameras be mandated instead of a safety partition or a choice between them because of research on other cities and especially the comprehensive approach to taxicab driver safety and the side-by-side blind testing of security cameras by the City of Portland, Oregon. Portland viewed the problem of taxicab driver personal safety as the “3 Ps” – prevention, protection, and prosecution. They looked at more than just hardware (i.e., the safety equipment - security cameras, safety partitions) and they considered the opinions of the taxicab industry and the impacts on the public. There were pros and cons about both security cameras and safety partitions - security cameras provided the most benefit for prevention and prosecution while safety partitions were most effective for prevention and protection. However, safety partitions could not prevent driver homicides. Moreover, Portland expected the equipment to work together as a system so that a driver notified dispatch if

he had a suspicious passenger or a crime in progress by using the concealed silent alarm, the dispatch verified the emergency following protocols and phoned 911 to request assistance and provided “real time” location information to the police using GPS, and the security camera provided evidence needed to identify, arrest and prosecute the suspect in the crime.

The Seattle requirement regarding silent alarms, GPS and security cameras are codified at SMC 6.310.320.S-U as follows:

*S. The taxicab and for-hire vehicle must be equipped with an operable digital security camera system approved by the Director pursuant to specifications provided by rule and adopted by the Director (summary suspension and Class B). All for-hire vehicles must be in compliance with this provision by March 1, 2009. Access to images made by any digital security camera is restricted to law enforcement personnel solely for the investigation and prosecution of crimes (Class C). Nothing in this subsection S shall be construed to remove a law enforcement agency's obligation to comply with the Fourth Amendment of the United States Constitution and article I, section 7 of the Washington Constitution in obtaining access to digital security camera images, including the requirement to obtain a search warrant if needed;*

*T. The taxicab must be equipped with a monitored silent alarm system approved by the Director pursuant to specifications provided by rule and adopted by the Director (summary suspension and Class B);*

*U. The taxicab must be equipped with a monitored Global Positioning System (GPS) pursuant to specifications contained in a rule promulgated by the Director (summary suspension and Class B);<sup>32</sup>*



The technical specifications for the silent alarms, GPS and security cameras were published as rules.<sup>33</sup> Much of the content for the technical specifications was borrowed from other cities. Security cameras were required in all Seattle taxicabs by March 1, 2006.

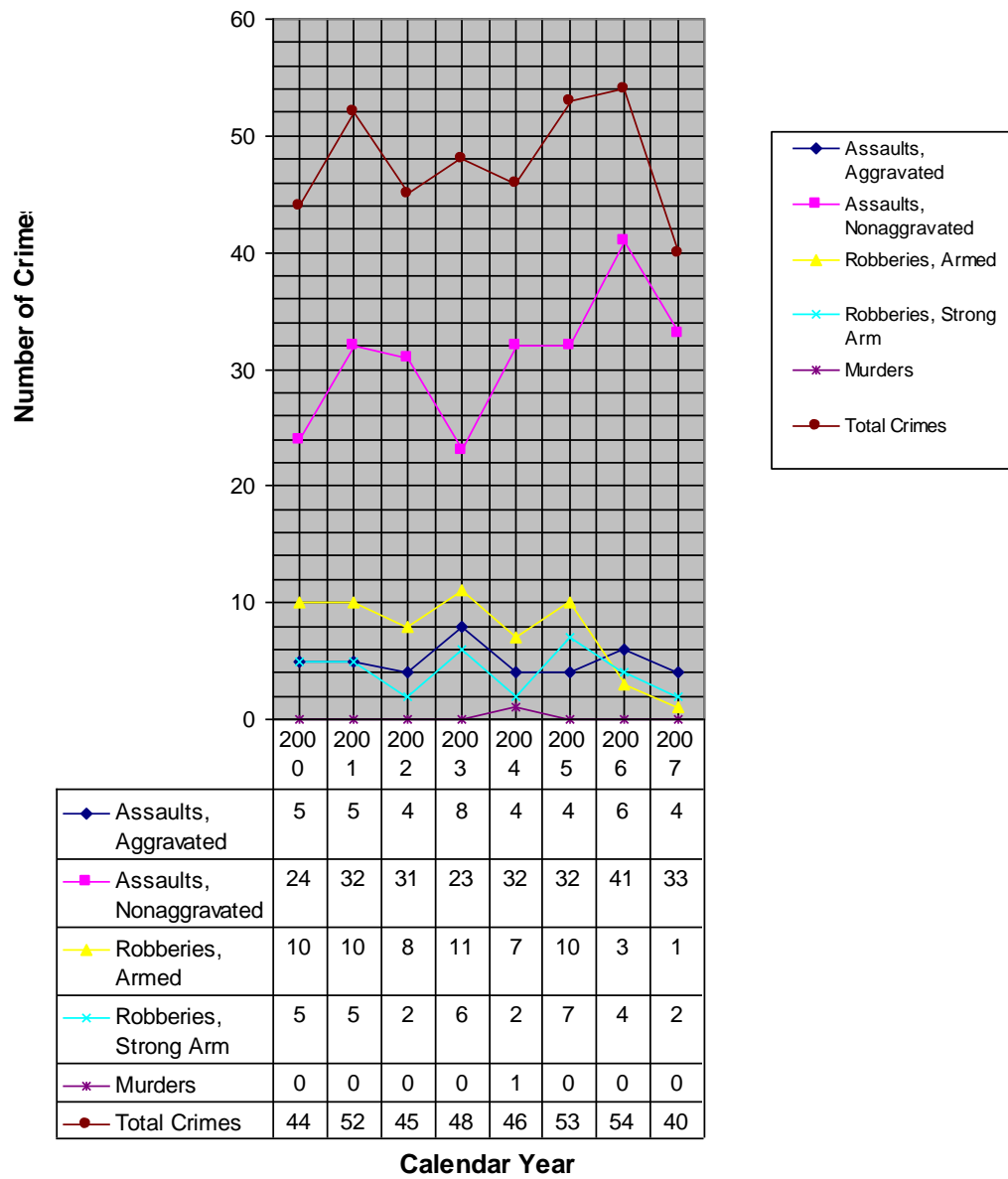
<sup>32</sup> <http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=6.310.320&s2=&S3=&Sect4=AND&l=20&Sect3=PLURON&Sect5=CODE1&d=CODE&p=1&u=%2F%7Epublic%2Fcode1.htm&r=1&Sect6=HITOFF&f=G>

<sup>33</sup> Security cameras [http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=\(R-6.310.320.S\).NUM.&l=20&Sect6=HITOFF&Sect5=TXIR1&d=TXIR&p=1&u=/~finance/TXIR1.htm&r=1&f=G](http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=(R-6.310.320.S).NUM.&l=20&Sect6=HITOFF&Sect5=TXIR1&d=TXIR&p=1&u=/~finance/TXIR1.htm&r=1&f=G)  
Silent alarms [http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=\(R-6.310.320.T\).NUM.&l=20&Sect6=HITOFF&Sect5=TXIR1&d=TXIR&p=1&u=/~finance/TXIR1.htm&r=1&f=G](http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=(R-6.310.320.T).NUM.&l=20&Sect6=HITOFF&Sect5=TXIR1&d=TXIR&p=1&u=/~finance/TXIR1.htm&r=1&f=G)  
Global Positioning System <http://clerk.ci.seattle.wa.us/~scripts/nph-brs.exe?s1=R-6.310.320.U&l=20&Sect6=HITOFF&Sect5=TXIR1&d=TXIR&p=1&u=%2F%7Efinance%2FTXIR1.htm&r=1&f=G>

## SECURITY CAMERAS AND CRIME TRENDS

Security cameras and silent alarms were installed in 659 Seattle taxicabs. Nearly all the taxicabs already had GPS as part of their computer dispatch system. Comparison of crime statistics from before and after security cameras were installed gives a simple measure of the effectiveness of security cameras in reducing crimes against taxicab drivers. According to SPD crime statistics, there was a dramatic 78% reduction in the “armed robbery” category of crimes from an average of 9 per year during 2000-2005 to just 2 per year during 2006-2008. This is the most dangerous crime involving taxicab drivers. It is a *planned* crime so the presence of security cameras in taxicabs may be assumed to be the major reason for this improvement in taxicab driver personal safety.

## Taxicab Crime in Seattle (2000-2007)



The other results are disappointing. The average number of crimes per year remained virtually unchanged for “strong-arm robbery,” “aggravated assault,” and “non-aggravated assault.” Also disappointing was the clearance rate (arrest rate) which remained almost unchanged. There are some possible reasons for these results. Often, assaults and robberies without a weapon involve persons who are under the influence of alcohol and the presence of a security camera is not much of a deterrent to someone who is not sober. The lack of improvement in the clearance rate may have multiple causes including: (1) the security camera is not working properly (drivers don’t like to lose time/revenue getting the camera repaired), (2) the taxicab driver doesn’t report a crime (again, to avoid losing shift time already paid for under a lease), (3) the taxicab driver doesn’t take the taxicab in to the SPD Video Unit for retrieval of the images from memory in time and the memory is overwritten, (4) the SPD detective doesn’t learn about the presence of a security camera soon enough and the memory is overwritten, and other similar reasons. To help address this, Seattle recently amended its rule to require additional memory capacity in the security camera control unit.

Even though some of the expected improvements in taxicab driver personal safety haven’t yet been realized, there have been some cases where security cameras proved to be very effective in leading to the arrest and conviction of suspects in serious crimes – armed robberies and homicide. For example, the month after the deadline for installing security cameras, a serial taxicab robber who had robbed three taxicabs in a week, and shot at two drivers who foolishly attempted to follow the suspect’s vehicle, was arrested because the security camera images allowed SPD to identify the suspect. A news advisory on this first success was issued (below).



# City of Seattle

Gregory J. Nickels, Mayor

## NEWS ADVISORY

**SUBJECT:** Security cameras in Seattle cabs score first successes; digital camera images led to recent arrests

**FOR IMMEDIATE RELEASE:**  
5/4/2006 11:15:00 AM

**FOR MORE INFORMATION CONTACT:**  
Craig Leisy, DEA, (206) 386-1296  
*Regarding digital security cameras in cabs*

### **Security cameras in Seattle cabs score first successes**

*Digital camera images led to recent arrests*

SEATTLE — Images from digital security cameras installed in cabs led to the arrest of man wanted in a string of April 23 vehicle thefts and home invasion robberies in two counties, as well as the arrest of a suspect in three recent armed robberies of cab drivers.

The suspect in the April 23 crimes was identified using video images from a security camera in a Seattle taxi the man used in his getaway. SeaTac police arrested the man April 27.

The armed robberies of cab drivers took place in Seattle April 1, April 7 and April 8. Images from the security cameras in the cabs led to the man's arrest April 9 by Seattle police.

[Security cameras](#) became mandatory in all city taxis on March 1, 2006. Access to a recording made by the digital security cameras in taxis is restricted to law enforcement personnel solely for the investigation and prosecution of crimes; search warrants are obtained if needed.

"Driving a cab is dangerous work," said Ken Nakatsu, director of the department of executive administration, which regulates the city's taxis. "These cameras are part of our initiative to improve public and driver safety. These recent arrests shows the cameras work."

Seattle Police Chief Gil Kerlikowske added, "Security cameras provide our detectives with a means of solving crimes. These cab-cams also serve as a deterrent to those that might engage in criminal behavior."

Taxis are also equipped with GPS trackers and monitored silent alarm systems. This safety equipment was recommended by the Taxicab Advisory Group Committee on Driver Safety. The recommendations were adopted by the mayor and the City Council in 2005.

Seattle established the driver safety committee in February 2004 immediately following the robbery homicide of a Yellow Cab driver, Hassan Farah. The committee conducted a comprehensive study of the taxicab driver personal safety issues and made specific recommendations designed to reduce taxicab crimes and driver injuries.

Committee members were drawn from within and outside the taxicab industry and included representatives from the taxicab drivers, taxicab owners and taxicab associations, as well as the Port of Seattle, Seattle Police Department, Hopelink (DSHS Medicaid transportation broker for King County), and the hospitality industry.

There are 643 taxicabs and approximately 1,500 taxicab drivers in Seattle. Drivers are dispatched via six taxicab associations: Farwest Taxi, North End Taxi, Northwest Taxi, Orange Cab, Redtop Taxi and Yellow Cab. Seattle police estimate there are approximately 60 robberies or assaults on cab drivers in Seattle each year.

During 2007, there was a gruesome murder-arson case involving a Seattle taxicab in a small city near Sea-Tac Airport. The suspect shot the driver twice then set the taxicab on fire to cover his crime. Even though the taxicab was completely destroyed by the fire, the security camera images were eventually recovered and used to convict the suspect of aggravated murder and arson. The evidence provided by a series of images showing the commission of both crimes was dramatic and compelling.<sup>34</sup>

More recently, the images from a security camera installed in a Seattle taxicab was instrumental in the identification and arrest of a serial robbery suspect [see news release below].

---

<sup>34</sup> [http://seattletimes.nwsources.com/html/localnews/2004404867\\_cabsentence10m.html](http://seattletimes.nwsources.com/html/localnews/2004404867_cabsentence10m.html)

# **SEATTLE POLICE** **DEPARTMENT**

Media Response Unit, Seattle Police Headquarters  
610 5th Avenue, PO Box 34986, Seattle, Washington 98124-4986  
<http://seattle.gov/police>



## **NEWS RELEASE**

***\* FOR IMMEDIATE RELEASE \****



***Sergeant Sean Whitcomb***

***Officer Jeff Kappel***

***Officer Renee' Witt***

***Officer Mark Jamieson***

***(206) 684-5520***

***7 AM – 8 PM WEEKDAYS***

Date: November 17<sup>th</sup>

### **Serial robber arrested**

Since October 28<sup>th</sup> a lone male was believed to be responsible for eight armed robberies. The first robbery victim was a taxicab driver. The remaining incidents occurred at small businesses, usually occupied by a lone female employee. Most of the incidents occurred in the downtown area but one occurred on Capitol Hill and another at Northgate Mall. In the taxicab robbery a photograph of the suspect was captured from the cab camera. Information developed from this led to the identity of the suspect. All the female victims in each additional robbery identified the suspect. A wanted robbery bulletin was distributed and broadcast faxes were sent out to notify the Downtown Business Association and Aurora Corridor Businesses.

On November 16<sup>th</sup> at 11:27 PM, a citizen witness spotted the suspect in the area of 12th Avenue & East Jefferson Street. The citizen immediately called 911. Officers rushed to the area and captured the suspect without incident. The arrest can be credited to the quick thinking and timely action of the good citizen, the image obtained by the cab camera and old fashioned detective work.

Robbery detectives processed and booked Charmarke Abdi-Issa, age 28, into King County Jail for Investigation of Robbery.

***For Seattle Police crime prevention information, please visit***

***<http://seattle.gov/police/prevention>***

## CONCLUSION

There is room for debate on which safety equipment – security cameras or safety partitions – is more effective in preventing crimes. Clearly, safety partitions provide a physical barrier that offers protection from most threats of violence from passengers behind the driver. Just as clearly, security cameras alone provide images of suspects that are needed to identify, arrest and prosecute them. Both technologies have pros and cons. What is beyond argument is the need for taxicab industry regulators to adopt a comprehensive driver safety plan that helps to mitigate the very serious risk factors that characterize the taxicab driver occupation. Moreover, simply making a choice between technologies is not enough. Taxicab inspectors on the street must make sure that taxicab drivers don't leave windows open in safety partitions or operate with a security camera that is malfunctioning. Finally, the taxicab industry and the police must work closely together to make sure that security camera images are retrieved as important evidence in making an arrest following a taxicab crime. The IATR and NIOSH have signed a Letter of Agreement to cooperate on a study to evaluate the effectiveness of security cameras and safety partitions and to recommend technical standards for an effective security camera installation. It is expected that this research will aid all cities in making decisions about the type of safety equipment to require and provide a sound basis for security camera technical specifications.

## THE TAXICAB INDUSTRY IN SEATTLE AND KING COUNTY

Crime statistics and other information collected by regulators in Seattle and King County, Washington are believed to be representative of the taxicab industry in many large cities. Seattle is the 24<sup>th</sup> most populous city in the U.S. with an urban population estimated to be 592,800 (2008). Seattle is located in King County which has a land area of 2,126 square miles and an estimated population of 1,826,732 (2006). The population for the entire state of Washington is estimated to be 6,395,598 (2006). The size of the combined taxicab and for-hire vehicle<sup>35</sup> industry in Seattle and King County is similar to other large city-county areas with comparable population. Presently, there are about 960 licensed taxicabs<sup>36</sup> and for-hire vehicles and approximately 2,900 licensed taxicab and for-hire vehicle drivers providing service to the city and county.

Craig Leisy  
Manager  
Consumer Affairs Unit  
805 South Dearborn Street  
Seattle, WA 98134  
(206) 386-1296  
[craig.leisy@seattle.gov](mailto:craig.leisy@seattle.gov)

---

<sup>35</sup> In Seattle, a for-hire vehicle is a motor vehicle providing transportation for compensation on a prearranged basis. They must charge for service based on flat rates or zone fares but not taximeters or odometers. For-hire vehicles operate similar to "town cars" but that is a separate industry regulated by the Washington Department of Licensing and the Washington State Patrol.

<sup>36</sup> Seattle has established caps for the maximum number of taxicabs at 850 (Ord. 122763, see <http://clerk.ci.seattle.wa.us/~public/CBOR1.htm>) and the maximum number of for-hire vehicles at 200. In Seattle, there are approximately 659 licensed taxicabs and 70 licensed for-hire vehicles at this time. King County has set a cap for the maximum number of taxicabs at 561. Many taxicabs and for-hire vehicles are dual-licensed.